Amendments to the Claims

This listing of claims below replaces all prior listings of claims in the application.

1. – 8. (Cancelled).

9. (Previously Presented) A lighting system, comprising:

two or more LEDs configured to produce at least two different spectra of radiation;

a processor including a memory;

a controller configured to control power delivered to at least one of the two or more LEDs, the controller being responsive to at least one signal communicated to the controller from the processor;

a light-transmissive material, wherein the two or more LEDs are arranged such that at least some of the radiation passes through the light-transmissive material; and

a user interface coupled to the processor,

wherein:

the user interface supplies a user interface signal to the processor, the user interface signal including at least one of a logic high signal and a logic low signal; and

the processor selects a program from the memory upon receipt of the user interface signal.

10. – 12. (Cancelled).

13. (Previously Presented) The lighting system of claim 9, wherein the processor adjusts a parameter of the program upon receipt of the user interface signal.

14. (Previously Presented) The lighting system of claim 9, wherein the processor further comprises a timer configured to measure a duration of the user interface signal, and wherein the processor adjusts a parameter of the program upon receipt of a predetermined duration of the user interface signal.

15. (Previously Presented) The lighting system of claim 14, wherein the parameter continues to change until the user interface signal changes.

16. (Previously Presented) The lighting system of claim 9, further comprising a housing wherein the two or more LEDs, the processor, the memory, and the controller are substantially enclosed by the housing, and wherein the user interface and the light-transmissive material-are integrated with the housing.

17. (Previously Presented) The lighting system of claim 9, further comprising:

a first housing configured to substantially enclose the processor, the memory, and the controller; and

a second housing configured to substantially enclose the at least two LEDs, wherein the light-transmissive material is integrated with the second housing.

18. (Previously Presented) The lighting system of claim 9, wherein the light-transmissive material comprises at least one of a semitransparent material, a translucent material, a semitransparent material and a transparent material.

19. (Previously Presented) The lighting system of claim 9, wherein the controller comprises at least one of a pulse width modulator, a pulse amplitude modulator, a pulse displacement modulator, a resistor ladder, a current source, a voltage source, a voltage ladder, a switch, a transistor, and a voltage controller.

20. (Previously Presented) The lighting system of claim 9, wherein the user interface comprises an encoder configured to provide an encoder signal as the user interface signal, and wherein the processor changes at least one of ~~a~~ the program and a parameter of the program upon receipt of the encoder signal.

21. (Previously Presented) The lighting system of claim 20, wherein the user interface further comprises at least one of a dial, a button, a switch, a slider, a variable switch, and a variable selector.

22. (Previously Presented) The lighting system of claim 9 or 13, wherein the user interface further comprises at least one of a button, a switch, a slider, a variable switch, and a variable selector.

23. (Previously Presented) The lighting system of claim 9, further comprising an analog to digital converter, wherein the user interface generates an analog signal and the analog to digital converter converts the analog signal to a digital signal, and wherein the digital signal is communicated to the processor.

24. (Previously Presented) The lighting system of claim 23, wherein the processor selects the program from the memory upon receipt of the digital signal.

25. (Previously Presented) The lighting system of claim 23, wherein the processor adjusts a parameter of the program upon receipt of the digital signal.

26. – 42. (Cancelled).

43. (Previously Presented) The lighting system of claim 9, further comprising a display coupled to the processor.

44. (Previously Presented) The lighting system of claim 43, wherein the display is at least one of an LCD screen, a plasma screen, a monochrome screen, and a color screen.

45. (Previously Presented) The lighting system of claim 44, wherein the display is configured to provide information regarding at least one of the selected program, a program setting, a program parameter, available programs stored in the memory, a time, a date, and control information.

46. – 49. (Cancelled).

50. (Previously Presented) The lighting system of claim of 9, wherein the user interface is remotely located from the processor.

51. (Previously Presented) The lighting system of claim 50, wherein communication of the user interface signal from the user interface to the processor is accomplished through at least one of an electromagnetic transmission, a radio frequency transmission, an infrared transmission, a microwave transmission, an acoustic transmission, a wire transmission, a cable transmission, and a network transmission.

52. – 71. (Cancelled).

72. (Previously Presented) The lighting system of claim 9, wherein the processor is at least one of a controller, an addressable controller, a microprocessor, a microcontroller, an addressable microprocessor, a computer, a programmable processor, a programmable controller, a dedicated processor, a dedicated controller, and an integrated circuit.

73. (Previously Presented) The lighting system of claim 72, further comprising a receiver for receiving at least one of an electromagnetic transmission, a radio frequency transmission, an infrared transmission, a microwave transmission, an acoustic transmission, a network transmission, a wire transmission, and a cable transmission, wherein the receiver is coupled to the processor.

74. (Previously Presented) The lighting system of claim 72, further comprising:

an analog to digital converter configured to communicate a digital signal to the processor; and

a receiver for receiving at least one of an electromagnetic transmission, a radio frequency transmission, an infrared transmission, a microwave transmission, an acoustic transmission, a network transmission, a wire transmission, and a cable transmission, wherein the receiver communicates an analog signal to the analog to digital converter.

75. (Cancelled).

76. (Previously Presented) A digital light engine, comprising:

at least one LED;

a processor having an external power signal input connection;

at least one controller coupled to the processor and configured to control power delivered to the at least one LED the at least one controller being responsive to at least one power cycle applied to the external power signal input connection; and

a housing that encloses at least the processor and the controller.

77. (Previously Presented) The digital light engine of claim 76, wherein the external power signal input connection is configured to receive at least one of electromagnetic transmissions, radio frequency transmissions, infrared transmissions, microwave transmissions, acoustic transmissions, wire transmissions, cable transmissions and network transmissions.

78. (Previously Presented) The digital light engine of claim 76, wherein the external power signal input connection is coupled to a user interface.

79. (Previously Presented) The digital light engine of claim 78, wherein the user interface includes at least one of a button, a dial, a slider, a linear switch, a rotary switch, and an encoder.

80. (Previously Presented) The digital light engine of claim 76, wherein the processor includes at least one of a controller, an addressable controller, a microprocessor, a microcontroller, an addressable microprocessor, a computer, a programmable processor, a programmable controller, a dedicated processor, a dedicated controller, and an integrated circuit.

81. (Previously Presented) The digital light engine of claim 79, wherein the power cycle includes turning power to the digital light engine off and then back on within a predetermined period of time via the user inteface.

82. – 92. (Cancelled).

93. (Previously Presented) A lighting system, comprising:

two or more LEDs configured to produce at least two different spectra of radiation;

a processor;

a controller configured to control power delivered to at least one of the two or more LEDs, the controller being responsive to at least one signal communicated to the controller from the processor;

a light-transmissive material, wherein the two or more LEDs are arranged such that at least some of the radiation passes through the light-transmissive material;

an analog to digital converter configured to communicate a digital signal to the processor; and

a receiver for receiving at least one of an electromagnetic transmission, a radio frequency transmission, an infrared transmission, a microwave transmission, an acoustic transmission, a network transmission, a wire transmission, and a cable transmission, wherein the receiver communicates an analog signal to the analog to digital converter.

94. (Previously Presented) The lighting system of claim 93, further comprising a remote user interface configured to communicate a user interface signal to the receiver via the at least one of the electromagnetic transmission, the radio frequency transmission, the infrared transmission, the microwave transmission, the acoustic transmission, the network transmission, the wire transmission, and the cable transmission.

95. (Previously Presented) The lighting system of claim 94, wherein the processor is configured to control the controller so as to change at least one parameter of the radiation in response to the user interface signal.

96. (Previously Presented) The lighting system of claim 95, wherein the processor includes a memory, and wherein the processor is configured to select one program of a plurality of programs from the memory in response to the user interface signal.

97. (Previously Presented) The lighting system of claim 96, wherein the processor is configured to adjust a parameter of the selected one program in response to the user interface signal.

98. (Previously Presented) The lighting system of claim 96, wherein the processor further comprises a timer-configured to measure a duration of the digital signal representing the user interface signal, and wherein the processor adjusts a parameter of the selected one program upon receipt of a predetermined duration of the digital signal.

99. (Currently Amended) An apparatus, comprising:

at least two LEDs configured to generate at least two different spectra of radiation that are combined to produce at least one perceivable color of light; and

at least one controller configured to control at least one parameter of the radiation generated by the at least two LEDs based at least in part on at least one lighting control signal received by the apparatus over at least one wireless communication link.

100. (Previously Presented) The apparatus of claim 99, wherein the at least one wireless communication link is configured to support at least one of a radio frequency transmission, an infrared transmission, a microwave transmission, and an acoustic transmission.

101. (Previously Presented) The apparatus of claim 100, wherein the at least one wireless communication link is configured to support at least one radio frequency transmission, and wherein the apparatus further comprises a radio transceiver coupled to the at least one controller to receive the at least one lighting control signal.

102. (Currently Amended) The apparatus of claim 100, wherein the at least one controller is configured to ~~control at least a color of the radiation generated by the at least two LEDs~~ vary the at least one perceivable color of light based at least in part on the at least one lighting control signal.

103. (Previously Presented) The apparatus of claim 100, wherein the at least one controller is an addressable controller, wherein the at least one wireless communication link forms part of a wireless communication network, and wherein the at least one lighting control signal includes information particularly identifying the apparatus.

104. (Previously Presented) The apparatus of claim 100, further comprising a memory storing at least one lighting program, wherein the apparatus is further configured to modify at least one variable of the at least one lighting program based on the at least one lighting control signal, and wherein the at least one controller is configured to control the at least one parameter of the

radiation generated by the at least two LEDs based at least in part on execution of the at least one lighting program.

105. (Previously Presented) The apparatus of claim 100, further comprising a memory storing a plurality of lighting programs, wherein the apparatus is configured to select one lighting program of the plurality of lighting programs based on the at least one lighting control signal, and wherein the at least one controller is configured to control the at least one parameter of the radiation generated by the at least two LEDs based at least in part on execution of the selected one lighting program.

106. (Previously Presented) The apparatus of claim 105, wherein the apparatus is further configured to modify at least one variable of the selected one lighting program based on the at least one lighting control signal.

107. (Previously Presented) A system including the apparatus of claim 100, the system further comprising at least one remote user interface coupled to the at least one wireless communication link and configured to generate the at least one lighting control signal based on user operation of the at least one user interface.

108. (Previously Presented) The system of claim 107, wherein the at least one remote user interface comprises at least one of dial, a button, a switch, a slider, a variable switch, and a variable selector.

109. (Previously Presented) A lighting method, comprising acts of:

A) producing at least two different spectra of radiation from two or more LEDs;

B) controlling power delivered to at least one of the two or more LEDs in response to at least one signal communicated from a processor;

C) passing at least some of the radiation through a light-transmissive material; and

D) selecting a program from a memory of the processor upon receipt of a user interface signal that includes at least one of a logic high signal and a logic low signal.

110. (Previously Presented) The lighting method of claim 109, further comprising an act of adjusting a parameter of the program upon receipt of the user interface signal.

111. (Previously Presented) The lighting method of claim 109, further comprising acts of:

measuring a duration of the user interface signal; and

adjusting a parameter of the program upon receipt of a predetermined duration of the user interface signal.

112. (Previously Presented) The lighting method of claim 109, further comprising an act of continuing to change a parameter of the program until the user interface signal changes.

113. (Previously Presented) The lighting method of claim 109, wherein the act B) comprises an act of controlling the power delivered to the at least one of the two LEDs via at least one of a pulse width modulation technique, a pulse amplitude modulation technique, a pulse displacement modulation technique, a resistor ladder, a current source, a voltage source, a voltage ladder, a switch, a transistor, and a voltage controller.

114. (Previously Presented) The lighting method of claim 109, further comprising an act of displaying information regarding at least one of the selected program, a program setting, a program parameter, available programs stored in the memory, a time, a date, and control information.

115. (Previously Presented) The lighting method of claim 109, further comprising an act communicating the user interface signal from the user interface to the processor via at least one of an electromagnetic transmission, a radio frequency transmission, an infrared transmission, a

microwave transmission, an acoustic transmission, a wire transmission, a cable transmission, and a network transmission.

116. (Previously Presented) A digital lighting method, comprising acts of:

generating radiation from at least one LED; and

controlling power delivered to the at least one LED in response to at least one power cycle applied to an external power signal input connection of a processor.

117. (Previously Presented) The digital lighting method of claim 116, further comprising an act of applying at least one of electromagnetic transmissions, radio frequency transmissions, infrared transmissions, microwave transmissions, acoustic transmissions, wire transmissions, cable transmissions and network transmissions to the external power signal input connection.

118. (Previously Presented) The digital lighting method of claim 117, further comprising an act of coupling the external power signal input connection to a user interface.

119. (Previously Presented) The digital lighting method of claim 118, further comprising an act of operating at least one of a button, a dial, a slider, a linear switch, a rotary switch, and an encoder of the user interface so as to generate the power cycle.

120. (Previously Presented) The digital lighting method of claim 116, further comprising an act of turning an operating power off and then back on within a predetermined period of time so as to generate the power cycle.

121. (Previously Presented) A lighting method, comprising acts of:

producing at least two different spectra of radiation from two or more LEDs;

controlling power delivered to at least one of the two or more LEDs in response to at least one signal communicated from a processor;

passing at least some of the radiation through a light-transmissive material;

generating an analog signal in response to receiving at least one of an electromagnetic transmission, a radio frequency transmission, an infrared transmission, a microwave transmission, an acoustic transmission, a network transmission, a wire transmission, and a cable transmission;

converting the analog signal into a digital signal; and

communicating the digital signal to the processor.

122. (Currently Amended) A method, comprising acts of:

A) generating at least two different spectra of radiation from at least two LEDs and combining the radiation to produce at least one perceivable color of light; and

B) controlling at least one parameter of the radiation generated by the at least two LEDs based at least in part on at least one lighting control signal received over at least one wireless communication link.

123. (Previously Presented) The method of claim 122, wherein the at least one wireless communication link is configured to support at least one of a radio frequency transmission, an infrared transmission, a microwave transmission, and an acoustic transmission.

124. (Previously Presented) The method of claim 123, wherein the at least one wireless communication link is configured to support at least one radio frequency transmission, and wherein the method further comprises an act of:

C) receiving the at least one lighting control signal via the at least one radio frequency transmission.

125. (Currently Amended) The method of claim 123, wherein the act B) includes an act of:

~~controlling at least a color of the radiation generated by the at least two LEDs~~ varying the at least one perceivable color of light based at least in part on the at least one lighting control signal.

126. (Previously Presented) The method of claim 123, wherein the at least one wireless communication link forms part of a wireless communication network, and wherein the act B) includes an act of:

controlling the at least one parameter of the radiation based at least in part on particular identification information represented in the at least one lighting control signal.

127. (Previously Presented) The method of claim 123, wherein the act B) includes an act of:

B1) controlling the at least one parameter of the radiation in response to execution of at least one lighting program.

128. (Previously Presented) The method of claim 127, wherein the act B) further includes an act of:

B2) modifying at least one variable of the at least one lighting program based on the at least one lighting control signal.

129. (Previously Presented) The method of claim 127, wherein the at least one lighting program includes a plurality of lighting programs, and wherein the act B) further includes an act of:

B2) selecting one lighting program of the plurality of lighting programs, based on the at least one lighting control signal, for execution in the act B1).

130. (Previously Presented) The method of claim 129, wherein the act B) further includes an act of:

B3) modifying at least one variable of the selected one lighting program based on the at least one lighting control signal.

131. (Previously Presented) The method of claim 123, further comprising an act of:

C) generating the at least one lighting control signal based on user operation of at least one remote user interface coupled to the at least one wireless communication link.

132. (Previously Presented) The method of claim 131, wherein the at least one remote user interface comprises at least one of dial, a button, a switch, a slider, a variable switch, and a variable selector.